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Case study: Factors contributing to Uncontrolled
Diabetes mellitus and Hypertension

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As a medical student, I realized that Hypertension (high blood pressure) and Diabetes mellitus (high blood glucose) related diseases are two main reasons patients are admitted for medical treatment at Public Health facilities in Guyana. On many occasions, patients who have been receiving medical care still do not have their blood glucose or blood pressure under controlled. Diabetes mellitus and Hypertension, if treated appropriately, patients can go on to live normal healthy lives.

I was enthusiastic to figure out why so many patients at the Georgetown Public Hospital were always returning to the wards/clinics with uncontrolled disease even though their primary care physician prescribed an appropriate treatment plan. Moreover, what effective methods can be put in place to curb this situation?

During my two years of clinical medical rotations, I tasked myself with collecting data from patients on their past medical history of illness, how it was managed and patients general knowledge of their condition. My research was conducted at Georgetown Public Hospital and the Palms Clinic in Guyana. The Ministry of Health manages both of these facilities. They are accessible to the public and provide free medical treatment. The patients who seek medical attention at these facilities are usually from communities throughout Guyana especially low social economic communities.

The type of research conducted was a cross sectional study. Patients were interviewed during my clinical rotation years. The aim was to understand the circumstances that contribute to patients' uncontrolled blood glucose level and blood pressure level. I collected data from patients who were returning for medical treatment because they had uncontrolled hyperglycemia (due to Diabetes mellitus) and/or Hypertension. Patients studied were from both Medicine and Surgical Ward and Clinic. In each of my case report, I recorded the number of times patients were admitted for the same condition, whether they were compliant to medical treatment and if not, reasons for non-compliance. Also recorded was the level of knowledge patient had of their disease and whether they follow the life style that is conducive to their condition. Age, sex, socio-economical status and level of education were also taken into content. Patients were also educated on their importance on management of their condition and the importance of complying with treatment plan. Efforts were made to follow up on patients who were discharge during their expected clinic dates.

This was an independent research. Data was recorded and discussion among GMOs and fellow medical students. Suggestion on how to disseminate information to patients and how to help them in effectively understanding how to manage their condition were researched. This research was conducted from the 2008 to 2010.

More than 60% of the daily admission at the Medicine and Surgical ward of the Hospital consists of patients with uncontrolled Diabetes and Hypertension which are major contributing factors to

death of patients over 40 years. The number one cause of amputation in Guyana is due to uncontrolled diabetes.

While there were cases where patients were compliant to treatment the majority were in-compliant. Patients' usual responses were that they were feeling better and did not want to continue using their medication. A common remark is that when they feel their 'pressure' getting high (headache or dizziness) they will take their medication. Alternatively, in the case of diabetes, patients would take their pills after eating a high sugar meal or when they feel unwell.

Patients complain that the medication makes them sick. They were not aware of the side effects of the medication and that there are alternative treatments. Seldom mention were availability and accessibility of treatment. Those with this complain were patients from outline areas where access is limited or those who refuse to spend a whole day just to see a doctor to refill prescriptions.

While many patients tried to change their life style, exercise more and eat healthier, others believed that taking the medication and not changing their life style would be effective.

Patients are aware of the basics information of their disease however, they are not educated enough on the proper management care they need to live a healthy life. They are often unaware of how their medication works and why they need to take it as prescribed. The importance of exercise and appropriate dieting seem to be a very difficult task to practice. The majority of these non-complaint patients come from the lower social-economic community where practicing a healthier lifestyle is too expensive to maintain.

More factors may contribute to patients' non-compliance to treatment. This report may show bias because it was conducted at Public facilities that are attended predominately by the lower economic class of citizens. A thorough research, not only in public medical facilities but also in private medical facilities is necessary. There is also a need for more long-term follow up with patients to see if factors addressed help improve the management of their condition.

Physicians need to spend adequate time with their patients to effectively manage and treat their ailment. However the challenge faced at public hospitals are overcrowded wards and clinics and under staffed facilities. Patient at Georgetown Public Hospital start arriving at 08:00 hrs and have to wait until 11:00 to 12:00 hrs before the physician arrive for clinic. The wards are so overcrowded that physicians are usually late for clinic. Because time is always against them, patients are sometime seen for less than 5 minutes.

I can conclude that the main reason why patients are non compliant to their treatment for hypertension and Diabetes mellitus related illness is because they lack the basic knowledge on how their medication works to help manage their disease. Physicians need to spend adequate time with their patients, not only administering a treatment plan but also explaining the

mechanism of action of the medication and the consequences of not complying with their treatment regimen. Cost efficient healthy diet and exercise plans also needed to be administered.